

Notice of Allowability

Application No.

10/691,635

Examiner

Abbas I. Abdulselam

Applicant(s)

DEVOS ET AL.

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 07/12/04.
2. ☒ The allowed claim(s) is/are 1-17.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 07/12/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 4-18-06
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

DETAILED ACTION

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Justin Cassell on 04/18/06.

Applicant has amended the abstract by substituting a version shown in the attachment.

Reasons for Allowance

2. The following is an examiner's statement of reasons for allowance:

Takashi et al. (Japanese Publication # 09-022273) teach a device, which is provided with a dot matrix type LED display unit 2, a display driving means 3 driving the lightings of the LEDs, a signal transmitting and receiving means 4 constituted of a first latch means 5 latching input control lines and input display data, a second latch means 6 latching respective output signals of the first latch means 5 with the opposite phase of an input clock and respectively, outputting them as output control lines and output display data and an inverter 7 and a display control means 8 controlling the display driving means 3 (see the abstract).

The prior art does not teach a pixel module for use in a large-area display, as part of a cluster of a plurality of sequentially interconnected similar pixel modules and driven by a central controller, comprising one or more pixel elements, characterized in that it further comprises a

Art Unit: 2629

serial video data bus input (SERIAL IN) and one or more command input lines (CMD's In) electrically connected to inputs of a latch having parallel inputs and outputs and which is clocked with a data clock input (DATA CLK); a current driver device for driving said one or more pixels which is electrically connected to the outputs of latch and to the data clock input (DATA CLK) and which includes a serial output port (SERIAL OUT) for transmitting the serial data to the next pixel module in sequence; a first inverter the output of which (DATA CLK "not") can be used to drive the data clock input (DATA CLK) of the next pixel module in sequence; a grayscale clock (GS CLK) input which is electrically connected to the current driver device and to an output (GS CLK) to drive the gray scale input of the next pixel module; an address input (ODD/EVEN) which is electrically connected to a second inverter, the output of which (ODD/EVEN "not") can drive the address input (ODD/EVEN) of the next pixel module; an EEPROM that is electrically connected to an input port (I.sup.2C BUS) for communication with said central controller, which input port is also connected to an output port (I.sup.2C) for connection with the next pixel module; and a power supply input and output.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 2629

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abbas I. Abdulsalam whose telephone number is 571-272-7685. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abbas Abdulsalam

Examiner

Art Unit 2629

April 18, 2006



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

U.S. patent application 10/169,635

ABSTRACT OF THE DISCLOSURE

A pixel module for use in a large-area display has a cluster of sequentially interconnected similar pixel modules that are driven by a central controller. The module includes pixel elements that have a serial video data bus input, and command input lines that are electrically connected to inputs of a latch. The latch has parallel inputs and outputs which are clocked with a data clock input. Also included are a current driver device for driving the pixels, a first inverter for driving the data clock input, an address input connected to a second inverter, an EEPROM connected to the input port, and a power supply.

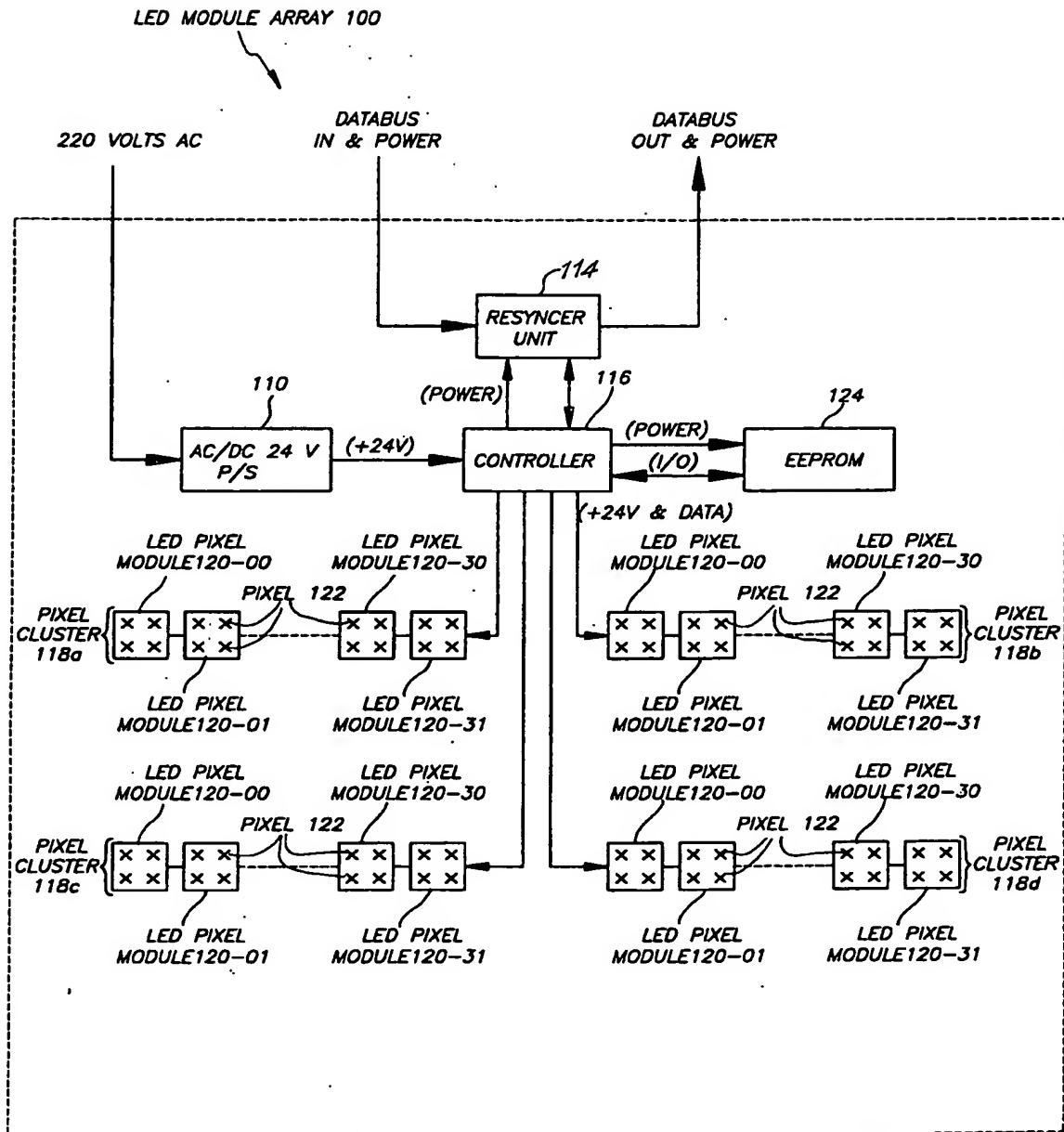


Fig. 1

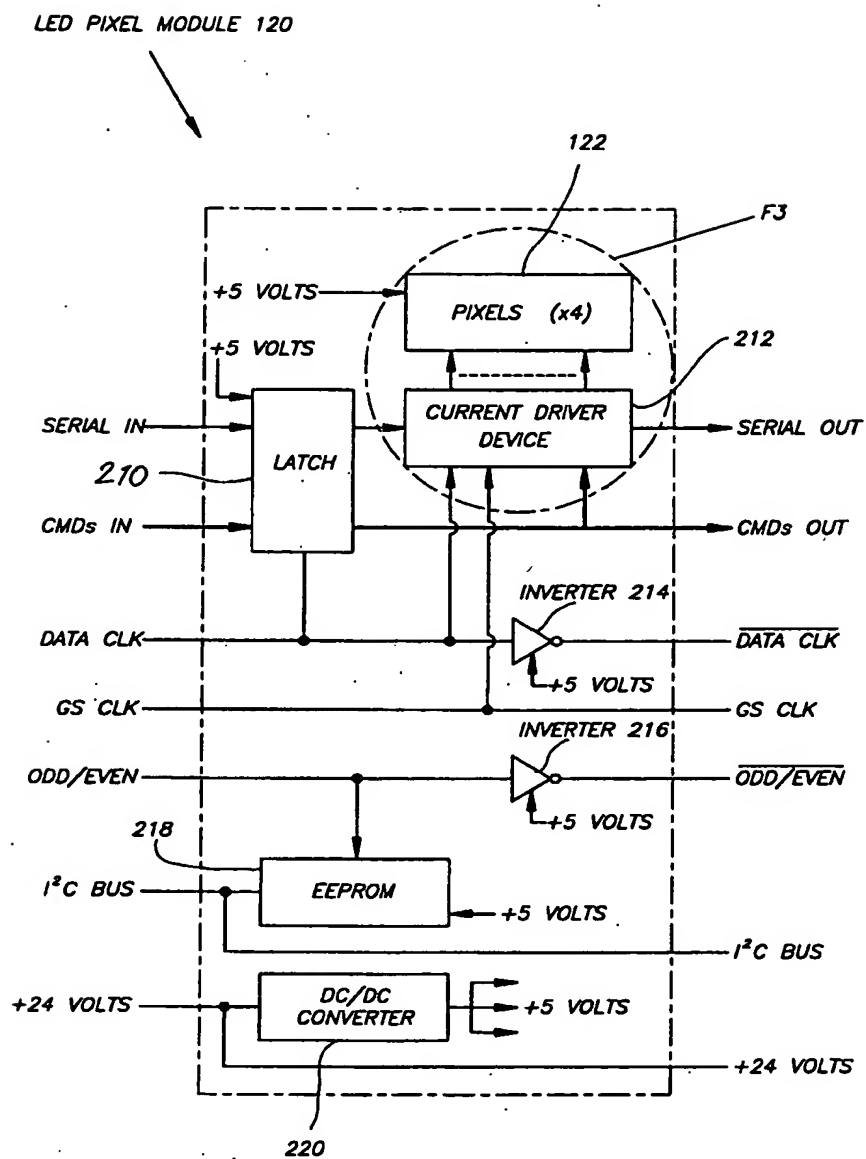


Fig. 2

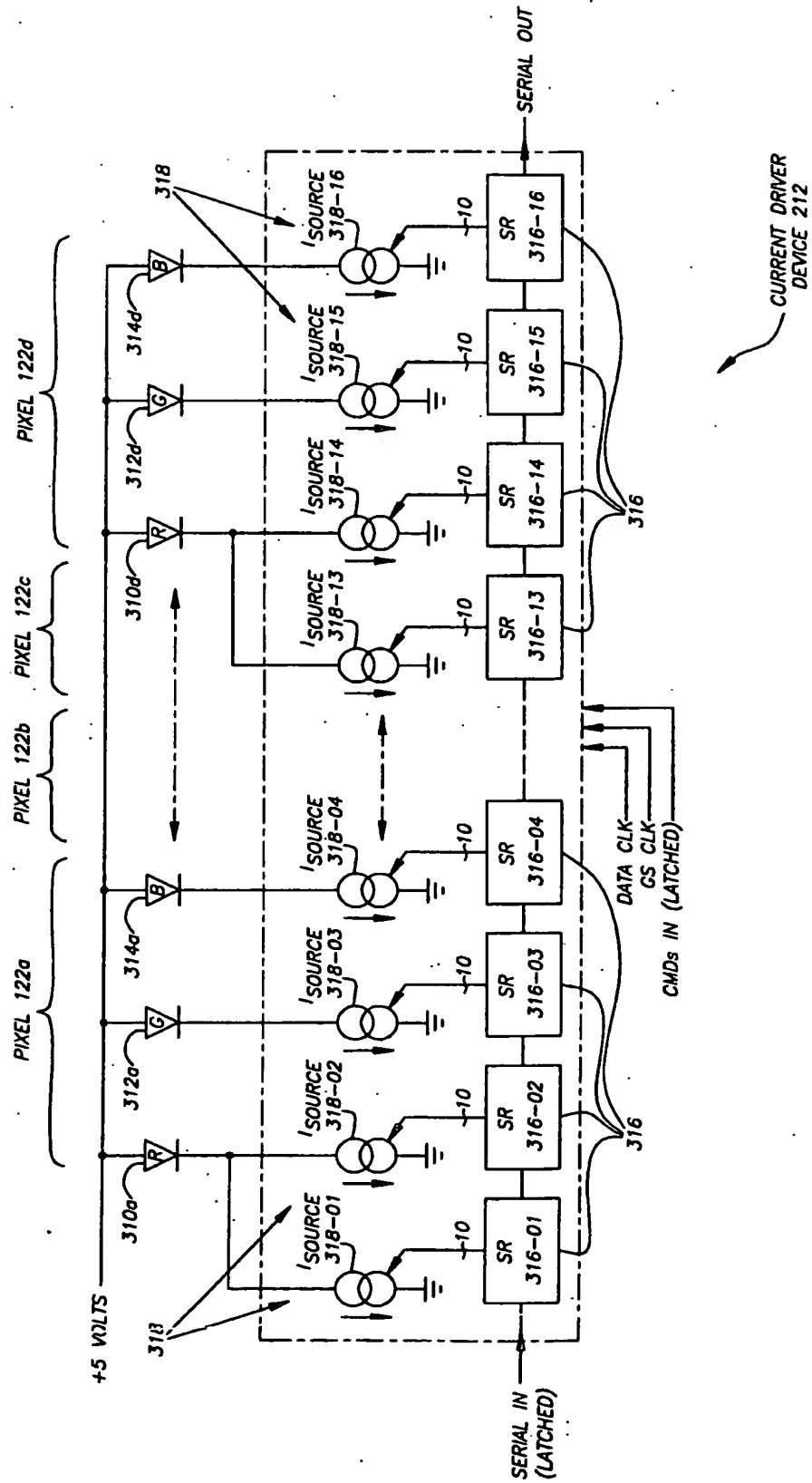


Fig. 3